

Supporting Information

Chiaronia et al. 10.1073/pnas.0910803106

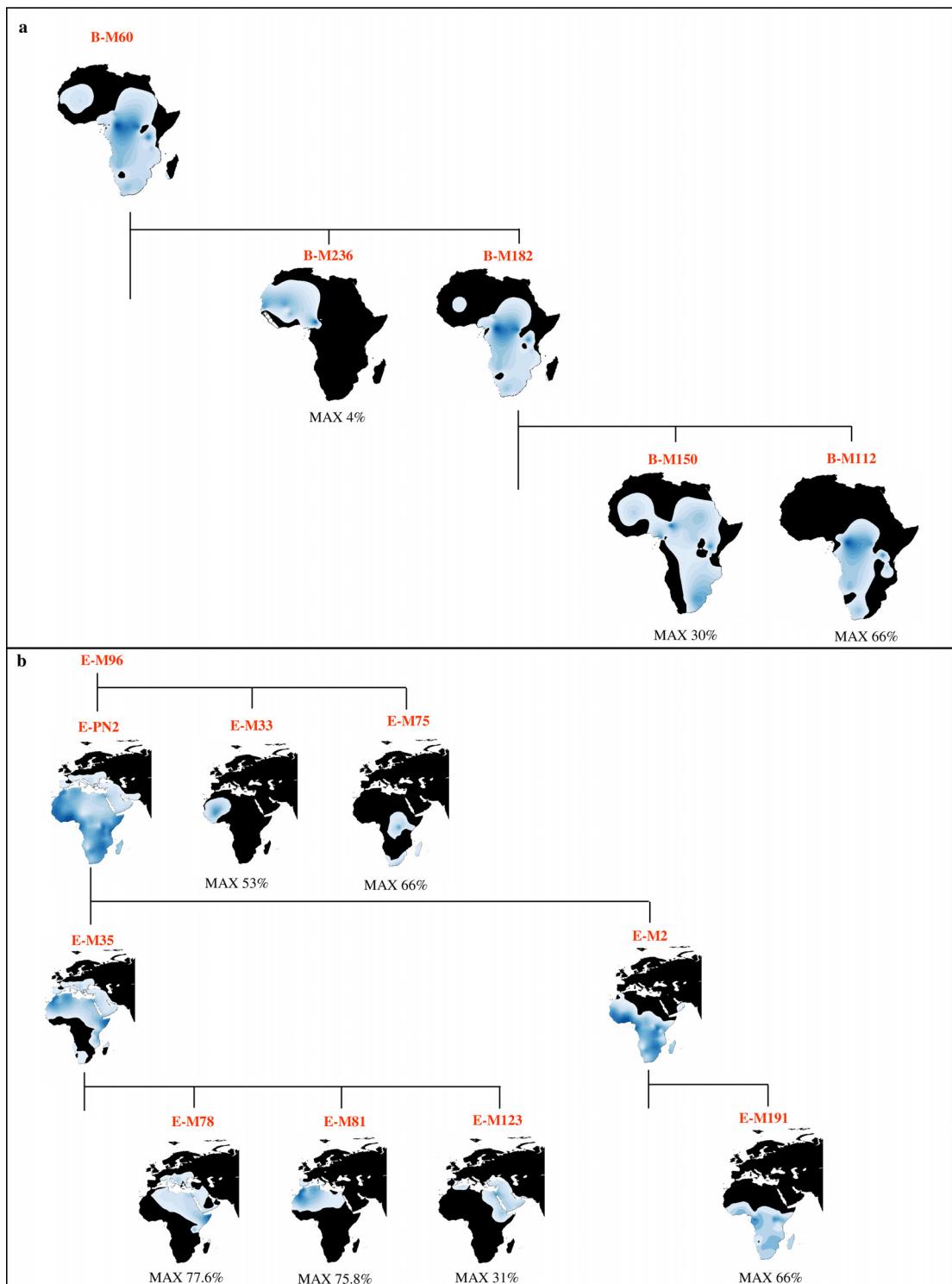


Fig. S1. Y chromosome subclades of some haplogroup frequency distribution maps.

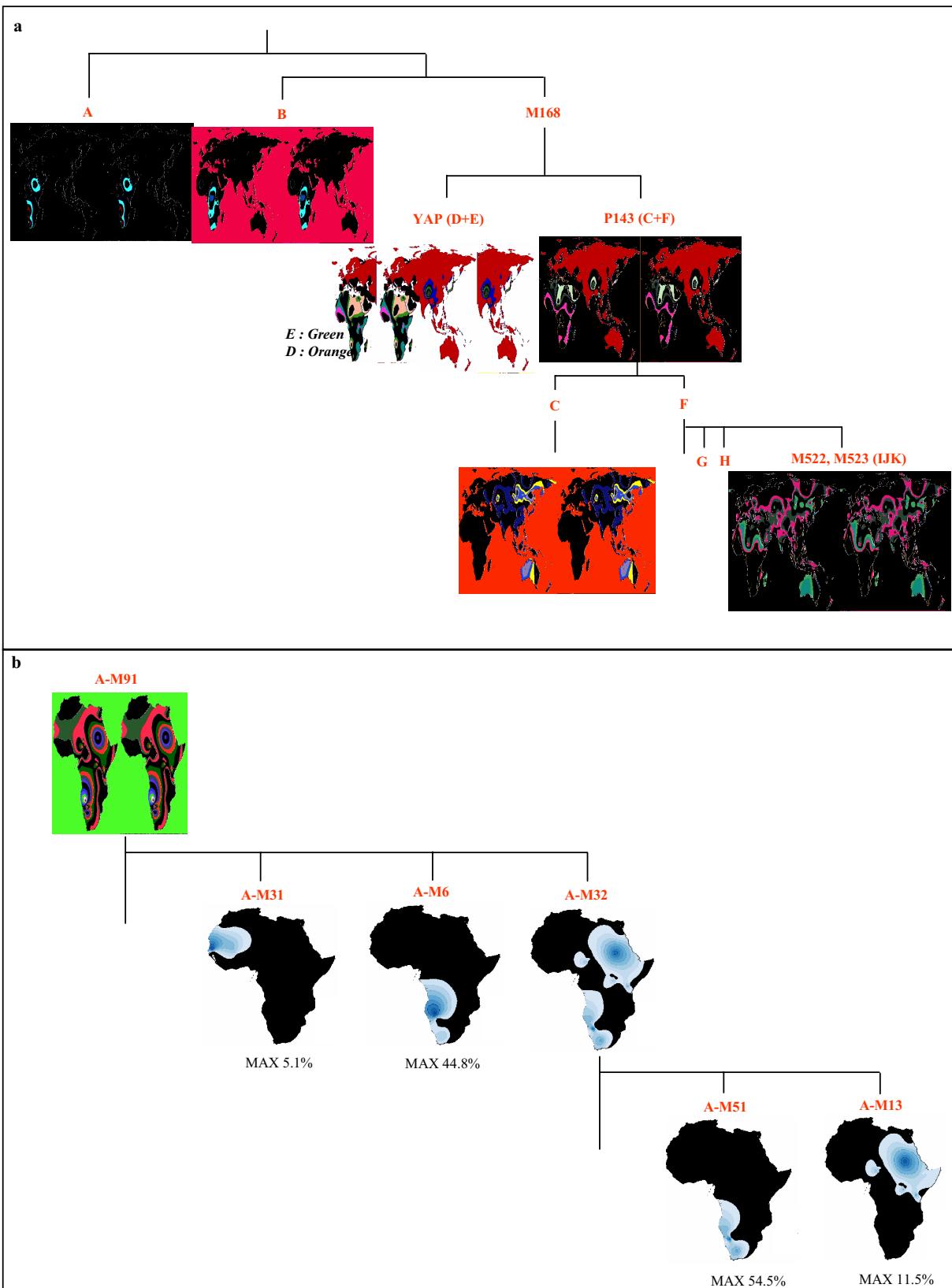


Fig. S2. Y chromosome subclades of some haplogroup frequency distribution maps.

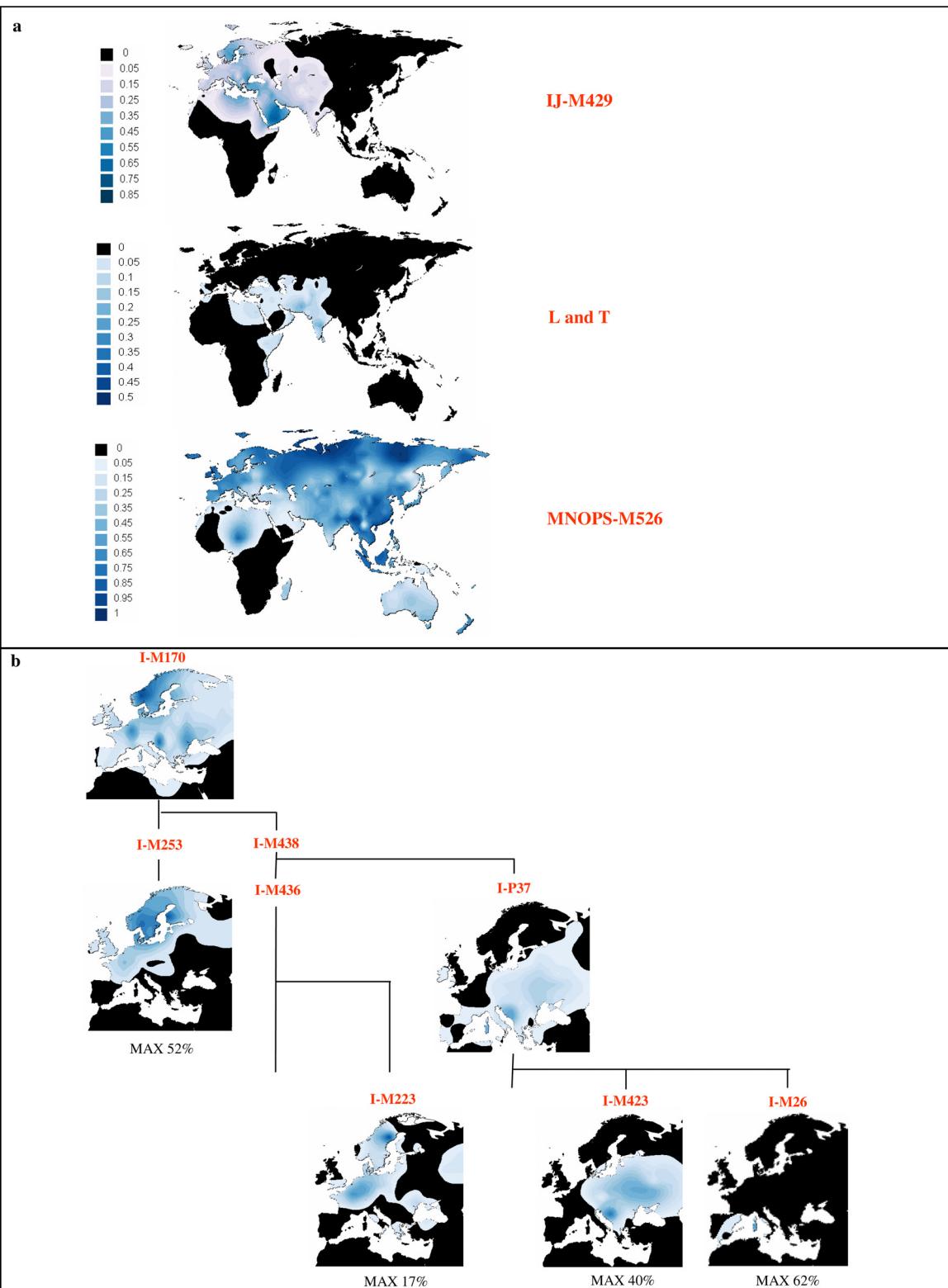


Fig. S3. Y chromosome subclades of some haplogroup frequency distribution maps.

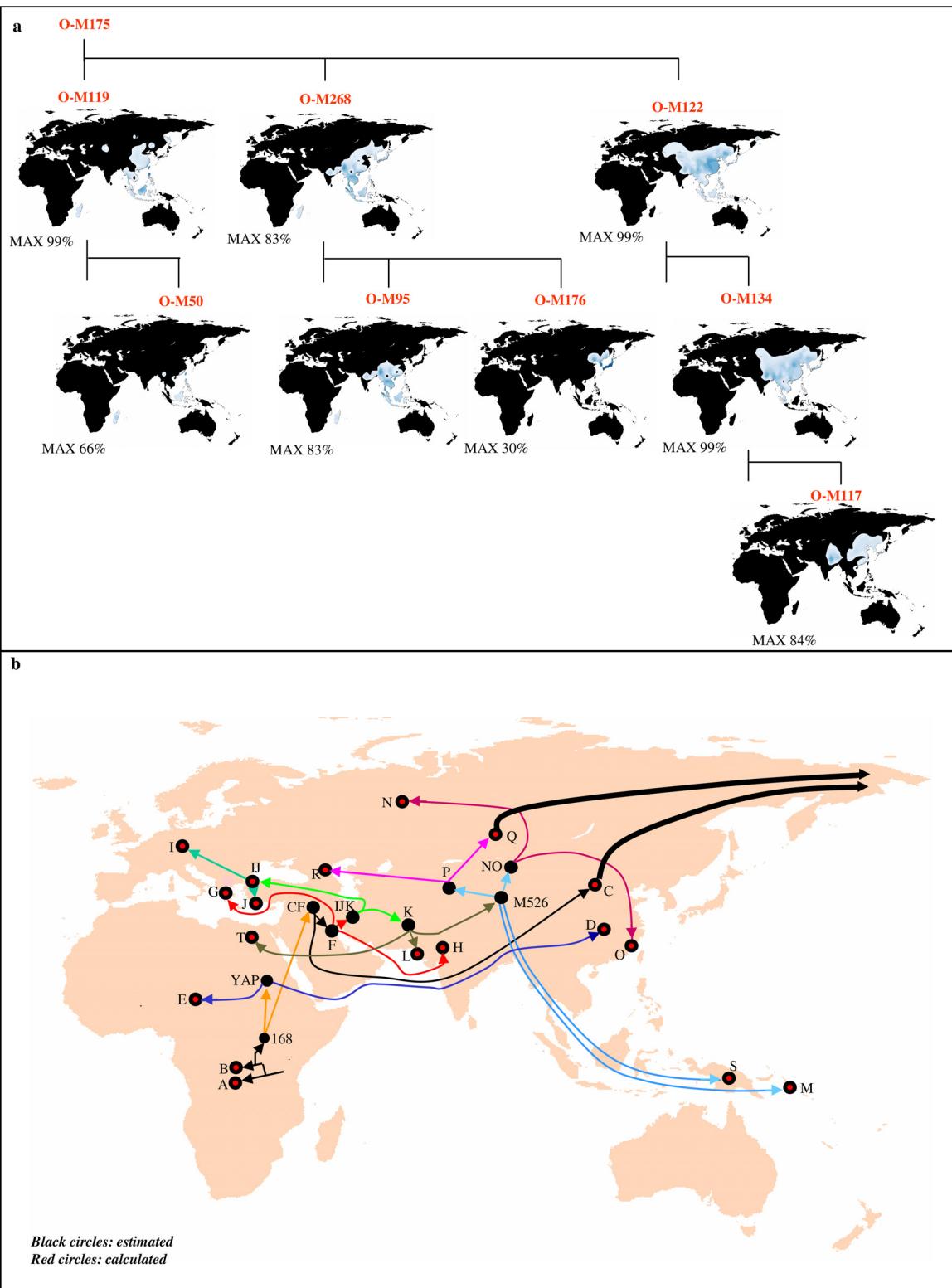


Fig. S4. Y chromosome subclades of some haplogroup frequency distribution maps. Panel *b* represents Y chromosome haplogroup centroids location map and the tree of Fig. 1 plotted to connect them. Circles with red centers are calculated centroids; black circles are a putative position.

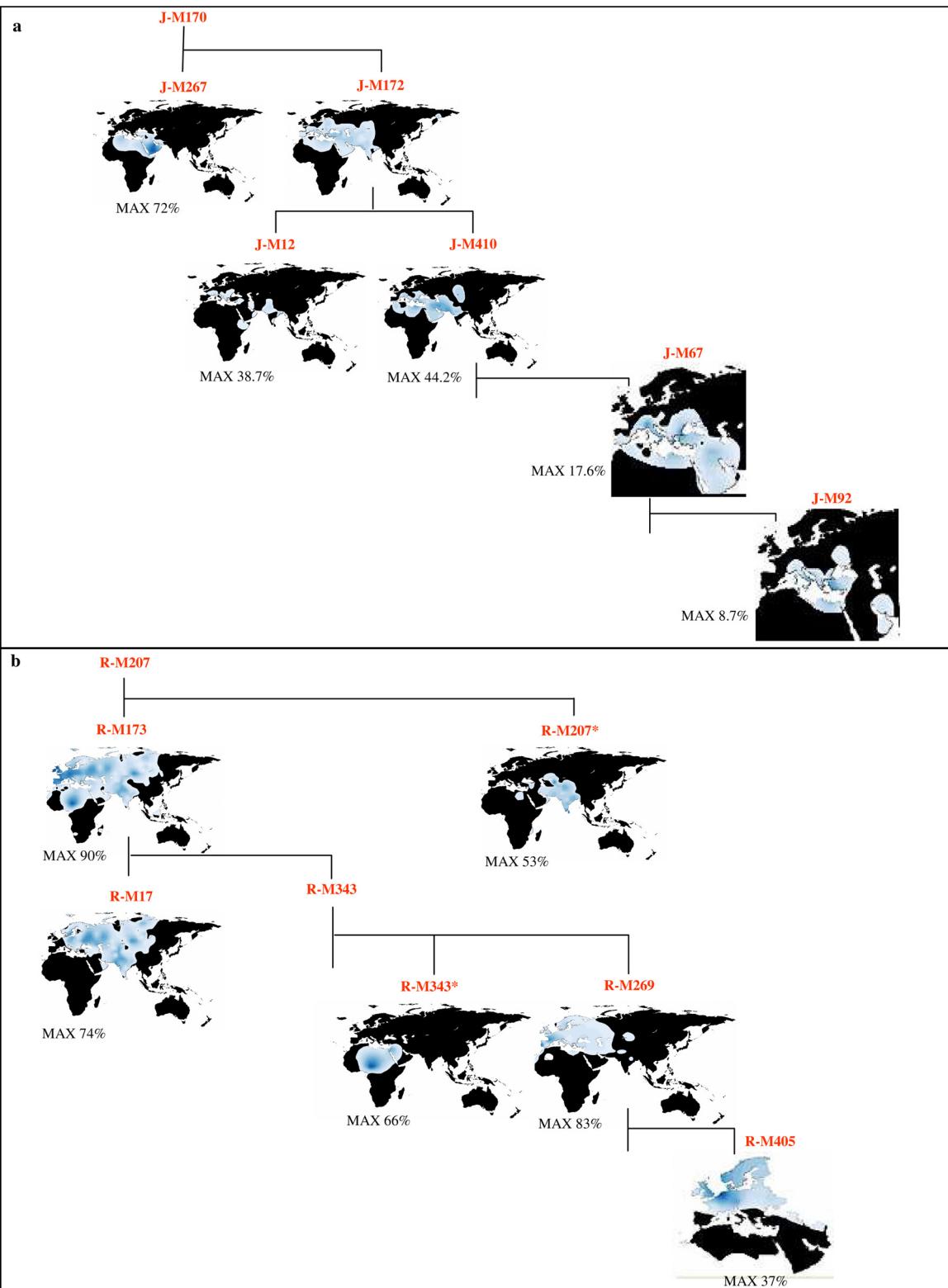


Fig. S5. Y chromosome subclades of some haplogroup frequency distribution maps. Circles with red centers are calculated centroids; black circles are a putative position.

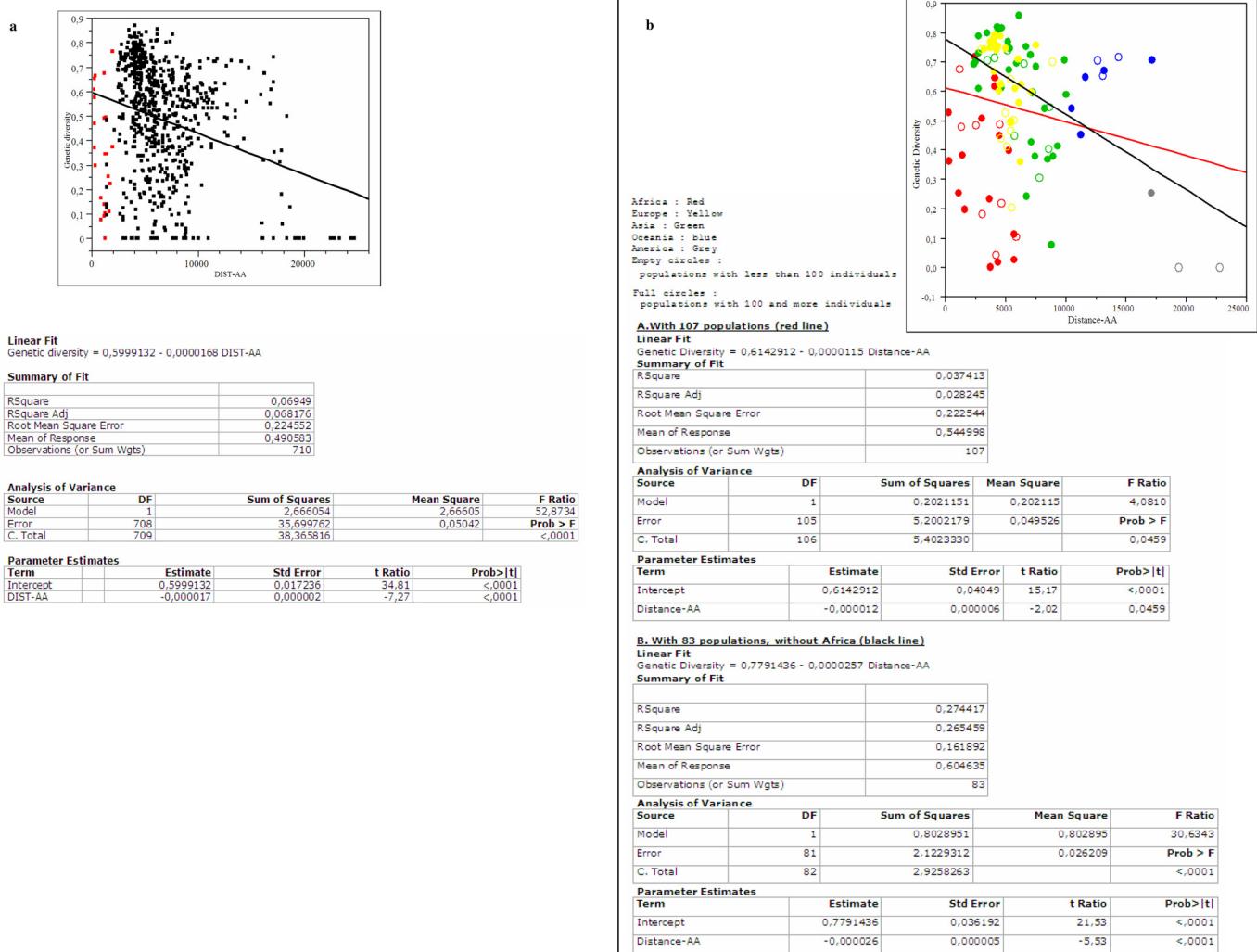


Fig. S6. (a) NRY chromosome genetic diversity of all population samples plotted against their geographic distance from Addis Ababa. Red dots are samples from oldest African populations (hunter-gatherers) who probably did not mix in an important way with the major Out of Africa expansion of the last 60,000 years. (b) NRY chromosome genetic diversity vs. geographic distance from Addis Ababa of 107 countries into which the original data from all population samples of Fig. S6a were grouped to calculate averages, to reduce the bias due to small size of many population samples. The grouping into 107 countries to which the original samples belong effectively reduced the bias introduced by the small size of most samples. Colors indicate the continent (red for Africa, light gray-yellowish for Europe, green for Asia, blue for Oceania, dark gray for America), and the empty circles indicate sample sizes per country less than 100, full circles sizes greater than 100. The red regression line refers to all data points including Africa, and the black line excluding Africa.

Table S1. References associated with SI

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Table S2. Coordinates of centroids for main Y chromosome haplogroups

Haplogroups	Longitude (°)	Latitude (°)	SD (°)
A	24.04	-6.27	22.35
B	23.99	-2.59	17.24
E	14.16	13.99	27.97
G	21.69	38.52	23.46
I	12.22	49.14	13.58
J	28.67	34.52	27.45
H	74.73	24.68	24.01
L	67.27	23.68	17.99
M	156.27	-6.98	17.30
N	64.28	59.51	25.08
O	120.03	23.51	25.74
T	28.18	28.71	29.28
R	22.28	39.66	33.95
D	112.18	29.90	19.74
C	109.62	40.28	27.46
Q	85.45	53.20	27.22

Table S3. PCR primers and specifications for Y chromosome SNPs that unite IJK (M522, M523) and KMNOPS (M526) haplogroups

Marker no.	rs no.	Nucleotide change	Amplicon size (bp)	SNP position from 5' end	Primer forward 5'-3'	Primer reverse 5'-3'
M522	rs9786714	GtoA	294	164	ggaggacacaagaattcagg	caatgaggctataaggtaagg
M523	rs9786139	AtoG	321	154	attagctggcggtggtg	ctgccatcagtggcatctac
M526	rs2033003	AtoC	430	240	catcacagtatttatgtcaggc	gtttgcaggggttctcc

Table S4. Estimates of NRY genetic diversity by continents and countries

Populations	Distances	Genetic diversity	n	Continents
Algeria	4,518	0.488	58	AFR
Benin/Nigeria	3,728	0	113	AFR
Burkina Faso	4,371	0.019	106	AFR
CA Republic	2,533	0.486	53	AFR
Cameroon	2,991	0.508	487	AFR
DR Congo	1,283	0.48	92	AFR
Egypt	2,464	0.718	306	AFR
Ethiopia	263	0.528	236	AFR
Gambia/Senegal	5,853	0.105	73	AFR
Ghana	4,168	0.043	91	AFR
Guinea Bissau	5,750	0.113	232	AFR
Kenya	1,084	0.252	113	AFR
Mali	4,617	0.219	99	AFR
Morocco	5,264	0.399	318	AFR
Namibia	4,119	0.644	143	AFR
Rwanda	1,588	0.198	163	AFR
Sao Tome	3,674	0.232	148	AFR
Senegal	5,722	0.026	154	AFR
Somalia	3,09	0.362	228	AFR
South Africa	4,470	0.45	329	AFR
Sudan	1,154	0.675	40	AFR
Tanzania	1,443	0.382	281	AFR
Tunisia	4,137	0.618	200	AFR
Zimbabwe	3,049	0.183	49	AFR
Central America	19,341	0	60	AM
North America	17,111	0.254	469	AM
South America	22,771	0	79	AM
Altai	6,463	0.694	98	AS
Anatolia	3,469	0.798	553	AS
Armenia	3,483	0.706	45	AS
Borneo	8,524	0.404	59	AS
Cambodia	7,185	0.597	50	AS
Central Asia	6,075	0.857	185	AS
China 1	6,674	0.753	769	AS
China 2	8,231	0.543	2939	AS
India 1	4,286	0.82	2123	AS
India 2	5,340	0.746	1735	AS
Indonesia	8,509	0.367	665	AS
Iran	2,771	0.787	172	AS
Iraq	2,762	0.608	139	AS
Japan	10,021	0.59	705	AS
Java	7,804	0.307	64	AS
Jordanian	2,529	0.7	146	AS
Kazakhstan	5,144	0.741	94	AS
Khasi	5,722	0.449	92	AS
Kirghizstan	5,207	0.769	135	AS
Korea	9,312	0.413	302	AS
Lebanon	2,795	0.73	113	AS
Malaysia	7,164	0.425	105	AS
Mongolia	7,533	0.685	308	AS
Nepal	5,291	0.673	188	AS
Oman	2,360	0.691	120	AS
Pakistan	4,009	0.76	177	AS
Philippines	8,949	0.38	210	AS
Siberia 1	7,072	0.724	585	AS
Siberia 2	9,870	0.706	421	AS
Sri Lanka	4,668	0.817	130	AS
Sumatra	8,613	0.546	75	AS
Taiwan	8,801	0.078	577	AS
Tajikistan	4,643	0.61	123	AS
Thailand	6,746	0.241	129	AS
Tibet	5,944	0.695	437	AS
Turkmenistan	4,053	0.714	47	AS
Uzbekistan	4,385	0.805	394	AS

Populations	Distances	Genetic diversity	n	Continents
Vietnam	7,479	0.378	131	AS
Albania	4,089	0.759	252	EU
Azzorre	7,128	0.597	121	EU
Basque	5,461	0.204	45	EU
Bosnia-Herzegovina	4,423	0.6	459	EU
Bulgaria	4,069	0.666	146	EU
Crete	3,230	0.743	361	EU
Croatia	4,600	0.622	166	EU
Cyprus	2,958	0.742	65	EU
Czech Republic	4,992	0.747	297	EU
Denmark	5,657	0.504	58	EU
Finland	6,123	0.56	556	EU
France	5,401	0.497	45	EU
Georgia	3,715	0.749	113	EU
Germany	5,404	0.465	43	EU
Greece	3,748	0.767	287	EU
Greenland	8,864	0.702	64	EU
Hungary	4,584	0.44	45	EU
Italia NC	4,928	0.528	50	EU
Italy	4,389	0.754	956	EU
Macedonia	4,135	0.795	315	EU
Madera	6,268	0.622	126	EU
Malta	3,872	0.756	90	EU
Poland	5,109	0.414	55	EU
Portugal	5,778	0.608	1070	EU
Romania	4,112	0.784	109	EU
Russia1	5,390	0.642	89	EU
Russia2	7,500	0.756	274	EU
Sardinia	4,531	0.787	180	EU
Serbia	4,254	0.741	113	EU
Sicily	4,036	0.782	211	EU
Spain	5,475	0.498	748	EU
Sweden	6,040	0.708	383	EU
UK	6,214	0.36	1770	EU
Ukrain	4,498	0.628	49	EU
Australia	10,461	0.54	148	OC
Melanesia	13,153	0.67	221	OC
Micronesia	13,049	0.653	90	OC
New Guinea	11,215	0.451	229	OC
PNG	11,615	0.649	217	OC
Polynesia1	14,352	0.718	60	OC
Polynesia2	17,174	0.708	479	OC
Trobriand Islands	12,601	0.706	53	OC

AF, Africa; AM, America; AS, Asia; EU, Europe; OC, Oceania.